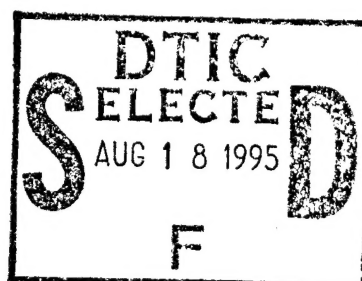


NAVAL POSTGRADUATE SCHOOL MONTEREY, CALIFORNIA



THESIS

THE IMPACT OF THE MILITARY DRAWDOWN ON USN AVIATOR RETENTION RATES

by

Russell S. Turner

March, 1995

Thesis Co-Advisors:

Stephen L. Mehay
Mark J. Eitelberg

Approved for public release; distribution is unlimited.

19950817 093

DTIC QUALITY INSPECTED 5

REPORT DOCUMENTATION PAGE			Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instruction, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188) Washington DC 20503.				
1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE March 1995		3. REPORT TYPE AND DATES COVERED Master's Thesis
4. TITLE AND SUBTITLE THE IMPACT OF THE MILITARY DRAWDOWN ON USN AVIATOR RETENTION RATES			5. FUNDING NUMBERS	
6. AUTHOR(S) Russell S. Turner				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Naval Postgraduate School Monterey CA 93943-5000			8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)			10. SPONSORING/MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government.				
12a. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution is unlimited.			12b. DISTRIBUTION CODE	
13. ABSTRACT (maximum 200 words) The objective of this thesis is to design and construct a unique analytical data base to be used to examine the effects of the military drawdown on the retention of Naval aviators. Past analyses of retention have focused primarily on the individual retention decision. This thesis uses grouped data defined by year of commission, fiscal year, and aviator type. The analysis quantifies the relationship between various downsizing policies and cohort continuation rates while controlling for the effects of time-since-MSR (minimum service requirement) and civilian unemployment. Separate regression models are specified for the jet, prop, and helo pilot communities, and for the jet and prop NFO communities, with the continuation rate as the dependent variable. The models are estimated using weighted OLS. The samples contained observations on a total of 1,907 cohort continuation rates for each fiscal year between 1977 and 1993. The study found that the percentage of Aviation Continuation Pay bonuses available in a given year is directly related to the grouped continuation rate. The effect of the VSI/SSB and IRAD programs was found to be statistically insignificant. Thus, it was concluded that the downsizing policies have had only a minor effect on the underlying, baseline continuation rate.				
14. SUBJECT TERMS Aviator Retention, Continuation Rates, Downsizing			15. NUMBER OF PAGES 80	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT UL	

NSN 7540-01-280-5500

Standard Form 298 (Rev. 2-89)

Prescribed by ANSI Std. Z39-18 298-102

Approved for public release; distribution is unlimited.

**THE IMPACT OF THE MILITARY DRAWDOWN
ON USN AVIATOR RETENTION RATES**

by

Russell S. Turner
Lieutenant, United States Navy
B.S., Old Dominion University, 1988

Submitted in partial fulfillment
of the requirements for the degree of

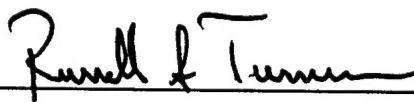
MASTER OF SCIENCE IN MANAGEMENT

from the

NAVAL POSTGRADUATE SCHOOL


March 1995

Author:

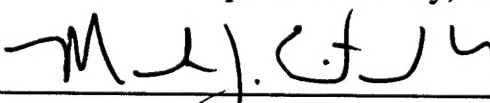


Russell S. Turner

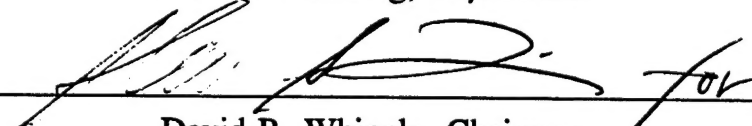
Approved by:



Stephen L. Mehay, Co-Advisor



Mark J. Eitelberg, Co-Advisor



David R. Whipple, Chairman
Department of Systems Management

Accession For	
NTIS CRA&I	<input checked="checked" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution /	
Availability Codes	
Dist	Avail and/or Special
A-1	

ABSTRACT

The objective of this thesis is to design and construct a unique analytical data base to be used to examine the effects of the military drawdown on the retention of Naval aviators. Past analyses of retention have focused primarily on the individual retention decision. This thesis uses grouped data defined by year of commission, fiscal year, and aviator type. The analysis quantifies the relationship between various downsizing policies and cohort continuation rates while controlling for the effects of time-since-MSR (minimum service requirement) and civilian unemployment. Separate regression models are specified for the jet, prop, and helo pilot communities, and for the jet and prop NFO communities, with the continuation rate as the dependent variable. The models are estimated using weighted OLS. The samples contained observations on a total of 1,907 cohort continuation rates for each fiscal year between 1977 and 1993. The study found that the percentage of Aviation Continuation Pay bonuses available in a given year is directly related to the grouped continuation rate. The effect of the VSI/SSB and IRAD programs was found to be statistically insignificant. Thus, it was concluded that the downsizing policies have had only a minor effect on the underlying, baseline continuation rate.

TABLE OF CONTENTS

I. INTRODUCTION	1
II. LITERATURE REVIEW	5
A. CALCULATING CONTINUATION RATES	5
B. METHODOLOGIES	5
C. CRITIQUE	7
D. BASELINE CONTINUATION RATES	8
E. SUMMARY	9
III. METHODOLOGY	11
A. INDIVIDUAL DATA	11
B. COHORT DATA	12
C. MODEL SPECIFICATION	12
IV. STATISTICAL RESULTS	15
A. RESULTS OF ESTIMATING OLS MODELS FOR ALL PILOTS	
COMBINED AND NFOS COMBINED	15
1. The Pilot Model	15
2. The NFO Model	15
B. RESULTS OF ESTIMATING SEPARATE OLS MODELS BY	
AIRCRAFT TYPE	17
1. Jet Pilots	17
2. Helo Pilots	17
3. Prop Pilots	18
4. Prop NFOs	19
5. Jet NFOs	19

C. DISCUSSION OF THE EFFECTS OF THE EXPLANATORY	
VARIABLES	21
1. Aviation Continuation Pay Program (ACP)	21
2. Voluntary Separation Incentive Program (VSI)	21
3. Involuntary Reduction in Active Duty Policy (IRAD)	21
4. MSR2	21
5. MSR3	22
6. Civilian Unemployment	22
D. GOODNESS-OF-FIT OF THE OLS MODELS	22
V. CONCLUSIONS	25
A. SPECIFICATION BIAS	26
B. RECOMMENDATIONS	27
C. SUMMARY	27
APPENDIX A. COHORT CONTINUATION RATES	29
APPENDIX B. SAMPLE MEAN VALUES	61
LIST OF REFERENCES	67
INITIAL DISTRIBUTION LIST	69

LIST OF TABLES

2.1	Calculation of CCR_{6-11} for Fiscal 1993	6
2.2	Baseline Continuation Rates by Years of Service	10
4.1	OLS Results for Pilots	16
4.2	OLS Results for NFOs	16
4.3	OLS results for Jet Pilots	17
4.4	OLS Results for Helo Pilots	18
4.5	OLS Results for Prop Pilots	18
4.6	OLS Results for Prop NFOs	19
4.7	OLS Results for Jet NFOs	20

I. INTRODUCTION

The objective of this thesis is to design and construct a unique analytical data base and to examine the effects of the military drawdown on the retention of Naval aviators. Having accurate measures of retention is vital to policymakers and planners, since retention rates influence many manpower requirements and force management policies. Herein lies the current problem: as part of the military drawdown, a number of policies were implemented whose goal was to induce separation. These policies thus reduced retention rates below what they normally would have been and distorted the underlying trend in voluntary retention. The purpose of this thesis is to identify and isolate the effect of these specific drawdown policies on aviator retention. The goal is to provide manpower planners with adjusted historical retention rates during that drawdown will serve as the basis for more accurate and reliable forecasts of future aviator retention in the post-drawdown period. These rates may also provide an early warning signal that policies may need to be altered to offset predicted changes in retention.

The training of Naval aviators, both pilots and Naval flight officers (NFOs), is among the most costly training provided by the Department of Defense and one of the biggest investments in human capital made by the Department of the Navy. Because of the size of this investment, retention must be sufficiently high to guarantee the Navy a return on its investment. Because of this, aviator retention rates are tracked and analyzed closely to detect future changes and to provide accurate and reliable data for policy formulation and manpower planning.

Two types of survival or retention rates are used to describe trends in the voluntary retention behavior of Naval aviators: (a) minimum service requirement (MSR) survival rates, and (b) cumulative continuation rates (CCR). MSR survival rates are true cohort rates in the sense that they track an aviation community from MSR-1 (the year before service obligation from flight school has been completed) to MSR+2 (two years after the obligation has been completed). This period, MSR-1 to MSR+2, encompasses

the period at the end of a service obligation incurred in return for flight training; and it is generally the time of highest voluntary losses in the pre-retirement career period.

The cumulative continuation rate (CCR) is the second (and official) method of calculating a survival rate. The CCR is calculated as the product of continuation or retention rates from a given MSR (generally, year of service 6) through the eleventh year of service. The continuation rates are calculated based on the "spot" retention rates from the cross section of aviators in the Navy spanning those years of service. Hence, the CCR is not a cohort survival rate, but rather a cross-sectional snapshot of continuation behavior.

Although, both the MSR and CCR are used to describe trends in the voluntary retention behavior of Naval aviators, there is some debate as to which of the two measures provides the better indicator of retention trends. However, policies implemented as part of the force downsizing have made identifying trends more difficult. These policies include:

1. requiring additional obligated service in return for flight training,
2. changing the augmentation policies for reserves,
3. requiring additional obligated service in return for aviation continuation pay (bonus),
4. and offering voluntary separation incentives (Voluntary Separation Incentive/Special Separation Bonus program) to target officers.

Hence, it is appropriate to determine what effects the policies that have been implemented to achieve the drawdown, may have had on underlying voluntary survival rates of Naval aviators. Note, too, that the military downsizing itself may have influenced retention behavior, independent of the specific policies.

The purpose of this study is to separate the influence of drawdown policies affecting observed retention from the decisions of aviators that form the "true" underlying voluntary survival rates. A new set of survival rates can be constructed that reflect

voluntary separation decisions, independent of separation induced by the drawdown policies. The effect of the various policies on observed retention in the original rates can then be estimated for both the MSR cohort rates and the CCRs. An overall assessment of the relative merits of the two methods of calculating retention is presented.

The effect of various policies is assessed at both a "micro" and a "macro" level. At the "micro" or individual level, the effect of policies on observed retention rates is assessed by calculating cohort rates based on the retention decisions of individual officers. A time line of policies affecting retention (e.g., date at which new MSR is effective and date for changes in Involuntary Reduction in Active Duty policies) is compared to actual transactions as indicated on personnel records. Involuntary individual retention/separation decisions have been deleted from the cohort rates. A synthetic set of "voluntary" rates is then constructed and compared with the original MSR and CCR rates.

The second, "macro" level adjustment to observed CCRs and MSR rates is based on a simple regression model. Continuation rates are calculated by fiscal year and year of service and related to policies that have likely influenced the rates in an "event" analysis. A regression analysis provides a quantitative estimate of the effect of those policies along with a method to adjust CCR and MSR rates.

II. LITERATURE REVIEW

Although no prior research has been conducted on the impact of military downsizing on Naval aviators, numerous studies have addressed aviator continuation rates. The continuation rate for a group of officers is the percent of a particular cohort (based on year of entry) remaining in the Navy over a given period. Because these rates influence numerous decisions concerning personnel policy, having accurate measures of aviator continuation is vital to defense policymakers and planners.

A. CALCULATING CONTINUATION RATES

Continuation rates measure the fraction of a cohort (sorted by designator and year group) remaining in a community from one year to the next. The continuation rate, C_t , is generally defined as the ratio of the inventory of a given cohort at the end of a period, A_t , divided by the inventory at the beginning of the period, N_t :

$$C_t = A_t / N_t$$

These simple continuation rates are used by planners to project the future availability of manpower. Accurate historical continuation rates are needed in planning for the number of pilots to train, the number to retain at different career points, and for determining the size and availability of monetary incentives such as the aviator bonus.

B. METHODOLOGIES

As previously observed, two methods are used to measure continuation behavior (Cymrot, 1988). The CCR is based on a cross section of continuation rates from different year groups in a single year. The CCR is used as an estimate of the probability of continuation over a segment of an aviator's career. In the aviation community, CR_{6-11} is used to measure continuation after the completion of the minimum service obligation for flight training. By using year of service (YOS) 6 as a starting point, the calculation captures all of the decisions at the time of completion of the initial service obligation, and encompasses the period of highest voluntary losses for aviators. The CCR is calculated

as the product of the annual continuation rates for the desired range of years of service. Table 2.1 illustrates the calculation of CCR_{6-11} for pilots in Fiscal Year 1993 (omitting all involuntary separations). Thus, in 1993 the CCR was 36.02 percent. In Table 2.1, YG denotes the year group, and CR is the continuation rate for each YOS. The concept behind this calculation is that if we start with one hundred aviators at YOS = 6 and six leave, then ninety-four continue to YOS = 7 at which time fourteen leave, and so on until YOS = 11. Thus, at YOS = 11, only thirty-six of the original aviators are shown to remain.

Table 2.1 Calculation of CCR_{6-11} for Fiscal 1993

YOS	YG	N_t	A_t	CR(%) A_t/N_t
6	87	270	257	95.2
7	86	1,086	942	83.6
8	85	723	574	71.5
9	84	345	295	80.1
10	83	321	296	85.6
11	82	358	297	92.0

Source: See Appendix A

CCR = 36.02%

Legend: YOS = year of service, CR = continuation rate, N_t = beginning inventory,
 A_t = ending inventory.

An alternative method for calculating continuation is the historical continuation rate, which is calculated by tracking a single year group (YG) or set of year groups over a period of years. For example, YG 82 could be tracked from fiscal 1987 to fiscal 1990 to determine the minimum service requirement or MSR survival rates from MSR-1 to MSR+2. The starting inventory for each group is determined by counting the number of aviators on active duty at the end of the initial year (i.e., for MSR-1, the end of fiscal 1987 for YG 82). The aviators in this cohort are then tracked until the end of the final year (i.e., for MSR+2, the end of fiscal 1992 for YG 82). The continuation rate is the inventory at YOS 8 divided by the starting inventory.

C. CRITIQUE

Continuation rates reflect the outflow of manpower from a community. Difficulties in accurately measuring continuation rates arise due to manpower "turbulence," which results from the following cohort inflows and outflows:

1. Lateral ins - Lateral transfer of a non-aviator to an aviator designator.
2. Lateral outs - Lateral transfer of an aviator to a non-aviator designator.
3. Accessions - Those not on active duty the previous year (i.e., interservice transfer of an aviator or return to active duty).
4. Year group ins - Change of year group.
5. Year group outs - Change of year group.
6. Attrition - Those leaving the Navy.

Inflows result in the ending inventory for one fiscal year not corresponding to the inventory at the beginning of the following year. This leads to a difference in calculated gross and net continuation rates. Continuation rates based on the gross flow are generally lower than rates based on net flows and tend to exaggerate attrition. As the amount of

turbulence in the data increases, the difference between gross and net continuation rates increases. (Cymrot, 1988) The following example illustrates the problem:

<u>Gross CR</u>	<u>Net CR</u>
Fiscal 1992 Beginning Inventory = 100	Fiscal 1992 Beginning Inventory = 100
<u>Fiscal 1992 Ending Inventory = 90</u>	<u>Fiscal 1993 Beginning Inventory = 95</u>
Gross CR = 90 percent	Net CR = 95 percent

Manpower planners and policymakers need to be aware of these differences and apply the appropriate rates to each situation. Cymrot (1988) concludes that, when continuation is used as an indicator of total inventory, inflows should be included in the calculation of endstrength. If the continuation rate is being used to measure the response of separation to policy changes, then the tracking of initial inventories (net CR) is a more accurate measure of continuation.

The inherent flaw with the CCR and MSR measures is that they do not take account of policies that are designed to alter retention. The potential failure to adjust in the CCR for changes in the MSR is a good example of this. The effects of aviator bonuses, voluntary and involuntary separation programs, and other policies are impounded in the rates. Although it is generally agreed that these policies affect the observed rates, policymakers and manpower planners are left conjecturing about the influence of such policies and the underlying retention rates.

D. BASELINE CONTINUATION RATES

Baseline continuation rates are defined as a set of continuation rates that would exist in the absence of any policies introduced to accomplish the downsizing. Forecasted baseline rates can be compared with the actual continuation rates during the downsizing to estimate the aggregate effect of the various downsizing policies on aviator continuation

rates. Thus, the underlying continuation rate is the difference between the predicted baseline and the actual rates during the downsizing period.

Two alternative methods to calculate the baseline rate can be employed: (a) net continuation rates for a specific year, and (b) the average of the net continuation rates for a group of years (Cymrot, 1989). Net continuation rates are the ratios of the inventories of each year group at the end of one year to the inventories at the end of the previous year. Each method has its advantages and disadvantages. Utilizing historical rates from a single year will account for current economic conditions, but may exaggerate the influence of a single factor or event. The advantage of taking the average of rates over several years is that long-term trends may be more readily identified. The main disadvantage is that economic conditions that have since changed may bias the calculated results.

The baseline rates calculated in Table 2.2 for fiscal 1987 show that the greatest pilot losses occurred during YOS 6 through 8. An increase in the MSR to seven years would only delay the majority of attrition by two years. Cymrot (1989) concludes that increasing the MSR to seven years has no impact on the percentage of pilots remaining through YOS 11.

E. SUMMARY

The literature reviewed provided a number of alternative methods and approaches that have been used to determine continuation (retention) rates for Naval aviators. The variation in acceptable methods for computing continuation rates indicates the difficulty in clearly defining the continuation rate for a specific situation. By accurately determining the appropriate continuation rate, policy-driven influences can be measured and controlled, resulting in underlying survival rates that more accurately reflect voluntary retention decisions of Naval aviators during the force downsizing. This will be attempted in the following chapter.

Table 2.2 Baseline Continuation Rates by Years of Service

<u>Year of Service</u>	<u>Fiscal 1987</u>	<u>Fiscal 1984-87(Average)</u>
1	.87	.87
2	.98	.98
3	.99	.99
4	.99	.99
5	.98	.97
6	.82	.88
7	.74	.76
8	.78	.79
9	.89	.90
10	.88	.89
11	.85	.91
12	.92	.94
13	.93	.96
14	.94	.97
15	.94	.98

Source: Cymrot ,1989.

III. METHODOLOGY

A major component of this research was the design and construction of a unique data base. Historical research has focused primarily on individual data; however, this study analyzes "grouped" data for which there was no existing data base. The resultant analytical data base created for this study will provide future research with a data base better suited to analyze aviator continuation rates.

A. INDIVIDUAL DATA

The database utilized in this study was created from the Officer Master File (OMF) maintained by the Defense Manpower Data Center (DMDC). The OMF contained information on commissioning date, officer designator, loss code, additional qualifying designators (AQDs), Aviation Continuation Program (ACP) participation, and minimum service requirement (MSR). From these data, separate files were created for each of fifteen different fiscal years during the period 1977 to 1993. However, data were missing for fiscal years 1980 and 1983. The database that resulted from merging these fiscal year files contained observations on 16,626 Naval Aviators from year groups 1960 through 1993. Several constraints were placed on the database.

First, only active duty and active-reserve Naval Aviators were included in the files (designators 1310, 1315, 1320, and 1325). Next, in order to include only aviators who were eligible to make the stay-leave decision, those still obligated under their minimum service requirement during a given year were omitted. Also omitted, were any observations with a Stop-Loss indicator equal to one. This denoted individuals whose normal separation was delayed due to Desert Shield/Desert Storm. Finally, observations with a Separation Code Designator (SPD) that indicated reason for separation as being "other than voluntary" were discarded in order to include only aviators who were able to make a voluntary decision. After applying these filters, 14,580 observations were available for analysis.

B. COHORT DATA

A SAS program, coded to determine cohort beginning inventory and ending inventory was run for each fiscal year. Frequency tables were created for each year group by aviator "type" (jet pilot, helicopter pilot, propeller pilot, jet Naval Flight Officer, and propeller Naval Flight Officer). The first set of tables recorded beginning inventories by including all aviators present at the beginning and end of the fiscal year. The ending inventories were calculated by deleting any observation with an SPD. This process resulted in the dataset containing only aviators still remaining at the end of the corresponding fiscal year. Cohort continuation rates (CRs) were calculated by taking the cohort ending inventory and dividing it by the cohort beginning inventory. CRs were calculated for each fiscal year by year group and by aviator type. This resulted in 1,937 aviator cohort continuation rates (Appendix A).

A grouped data file was created using the aviator cohort continuation rates. Each cohort CR was defined as a separate observation in the new dataset. Each observation represents a separate fiscal year, year group, and aviator type. Variables of interest relevant to each observation were then created using fields from the OMF and external information. Annual unemployment data from the Bureau of Labor Statistics and reserve officer augmentation rates as reported by the Aviation Community Manager were created for each cell in the grouped data set. Any observations with a CR equal to 0 or from a year group that was still under MSR was discarded. The final grouped dataset contained 1,552 observations, representing aviator cohorts (year group 60 to 87) by aviator type for fiscal 1977 to 1993. The data represent continuation rates for each of these cells.

C. MODEL SPECIFICATION

The analysis focused on the effect of downsizing policies on aviator cohort continuation rates. The relationship of various downsizing policies to the continuation rate of aviators was specified by the following Ordinary Least Squares (OLS) multivariate regression model:

$$CR_i = \alpha_0 + B_1ACP + B_2VSI/SSB + B_3IRAD + B_4MSR2 + B_5MSR3 + B_6UNEMP + U$$

where, CR is the continuation rate for cell i , α is the intercept term, and the B's represent the coefficients of the variables in the equation to be estimated. The model is estimated using weighted least squares. Weights are used to account for the large variation in cell size across observations and to avoid heteroscedasticity.

The dependent variable, CR, is a continuous variable representing the continuation rate for a given cell. The independent variables are defined as follows:

1. *ACP* is the number of aviation continuation bonuses available to a cohort, defined as a percentage of the cohort;
2. *VSI/SSB* is the percentage of a cell that meets the eligibility requirements for the voluntary separation incentive (VSI) or special separation bonus (SSB);
3. *IRAD* is a dummy variable that captures the effect of the Involuntary Reduction in Active Duty (IRAD) policy¹;
4. *MSR2* is a dummy variable for aviators in the period MSR, MSR obligation completed, to MSR+2, two years since the completion of MSR obligation (1 = yes, 0 = no);
5. *MSR3* is a dummy variable for MSR+3 to MSR+5 (1 = yes, 0 = no);
6. *UNEMP* is the annual unemployment rate as reported by the Bureau of Labor Statistics. The error term is represented by U . Appendix B contains the mean values for each model variable.

¹ Since the IRAD policy is a function of reserve augmentation rates and these rates generally affect only those in YOS 6 through YOS 11, and then, only that portion of the cohort that are reserves, the value of .30 was assumed to be the average percentage of reserves in each cohort. This value was applied only to cohorts with YOS 6 through YOS 11.

The expected or hypothesized direction (sign) of the relationships between the independent variables and the continuation rate is as follows:

1. ACP is hypothesized to have a positive effect on the continuation rate of both pilots and NFOs. Historically, the policy of offering monetary incentives to aviators to curtail projected manpower shortages has been successful. Theoretically, then, the assumption can be made that the greater the number of bonuses offered, the greater the continuation rate will be.
2. VSI/SSB is theorized to be negatively related to retention (continuation) for both groups. This voluntary downsizing policy is similar to ACP, but opposite in its intent. In this case, a monetary incentive is offered to increase separations, and should result in a decrease in CR.
3. IRAD, an involuntary downsizing policy, was the product of abnormally low augmentation rates for reserve aviators.² This policy resulted in the separation of an aviator if he/she failed to augment. Because it is a decrease in the norm, IRAD is hypothesized to have a negative impact on the continuation rates of pilots and NFOs.
4. MSR2 is expected to have a negative relationship with both groups since it captures the period of time that historically accounts for the greatest manpower losses. The MSR3 variable is theorized to be positively related to continuation. Historically, once individuals have survived through MSR+2, the relationship between years of service and the continuation rate becomes positive (see the calculated CRs in Appendix A).
5. UNEMP is a theoretically relevant environmental variable hypothesized to have an inverse relationship with the continuation rate. It is included in the analysis to investigate the statistical significance and magnitude of the effect of civilian employment conditions.

Seven separate OLS models were estimated, one for pilots, one for NFOs, and one for each respective community (jet, prop, helo, jet nfo, prop nfo). Separate models were run due to the sizable differences in retention behavior between pilots and NFOs, and between aviation communities that have been observed in prior studies (Cymrot, 1987).

² Augmentation rates for 1993, as reported by the Aviation Community Manager, were 21 percent for pilots and 15 percent for NFOs.

IV. STATISTICAL RESULTS

Results of estimating the weighted OLS models are presented in Tables 4.1 through 4.7. Results for each OLS equation (table) are first summarized. Based on the a priori hypothesized effects of the explanatory variables, a one-tail test of significance is used to test the significance of the regression coefficients (Gujarati, 1988). Following the summaries, each explanatory variable is examined by comparing the expected results and observed outcome of the models.

A. RESULTS OF ESTIMATING OLS MODELS FOR ALL PILOTS COMBINED AND NFOS COMBINED

1. The Pilot Model

Table 4.1 displays the results from a combined OLS model for all three pilot communities (jet, helo, prop). The ACP variable and time-since-MSR variables (MSR2 and MSR3) are all statistically significant for this combined model. The VSI/SSB is not statistically significant, and the positive sign is the opposite of the hypothesized negative relationship. This result occurred in all subsequent models and is discussed further in section C. The IRAD variable is also statistically insignificant; however, its sign is negative, as hypothesized. The unemployment variable also was not statistically significant in this model.

2. The NFO Model

Table 4.2 displays the results from an OLS model of NFO communities including both prop and jet aircraft types. The ACP and time-since-MSR variables are significant, as they were in the pilot model. Again, the remaining variables were not statistically significant. The different results (opposite signs for MSR2) between the two models is explained by the historically observed differences in retention behavior between pilots and NFOs (Cymrot, 1987).

Table 4.1 OLS Results for Pilots

MODEL 1 CR PILOT		
VARIABLE	COEFF	t-VALUE
ACP	15.12	2.048*
VSI/SSB	5.92	0.884
IRAD	-3.79	-0.746
MSR2	-7.80	-2.909*
MSR3	11.14	3.894*
UNEMP	-0.40	-0.412
CONSTANT	88.56	13.763
Rsq. = .034 n = 932	F = 5.43*	*Sig. at .05

Table 4.2 OLS Results for NFOs

MODEL 2 CR NFO		
VARIABLE	COEFF	t-VALUE
ACP	18.92	2.508*
VSI/SSB	4.83	0.838
IRAD	-5.39	-1.253
MSR2	5.44	1.954*
MSR3	10.94	3.852*
UNEMP	-0.79	-0.857
CONSTANT	88.65	14.482
Rsq. = .0431 n = 623	F = 4.629*	*Sig. at .05

B. RESULTS OF ESTIMATING SEPARATE OLS MODELS BY AIRCRAFT TYPE

1. Jet Pilots

Table 4.3 summarizes the OLS results using the grouped data for jet pilots. The ACP and IRAD variables were not statistically significant; however, the signs of the coefficients were positive and negative, respectively, as hypothesized. MSR2 and MSR3 were both significant with the expected signs. The remaining variables were not statistically significant.

Table 4.3 OLS results for Jet Pilots

MODEL 3 CR JET PILOT		
VARIABLE	COEFF	t-VALUE
ACP	14.46	0.834
VSI/SSB	1.70	0.108
IRAD	-4.97	-0.443
MSR2	-12.16	-2.009*
MSR3	16.88	2.252*
UNEMP	-0.89	-0.387
CONSTANT	93.63	6.142
Rsq. = .0394 n = 310	F = 2.10*	*Sig. at .05

2. Helo Pilots

Table 4.4 summarizes the OLS results for helicopter pilots. ACP and MSR3 were statistically significant for helo pilots. The IRAD variable was insignificant, but displayed the hypothesized sign. Although the MSR2 variable was also insignificant, it should be noted that the sign of the coefficient was positive, which was not expected.

Table 4.4 OLS Results for Helo Pilots

MODEL 4 CR HELO PILOT		
VARIABLE	COEFF	t-VALUE
ACP	20.01	1.783*
VSI/SSB	9.44	0.952
IRAD	-4.40	-0.533
MSR2	5.01	1.109
MSR3	12.06	2.797*
UNEMP	-1.04	-0.727
CONSTANT	89.08	9.427
Rsqu. = .0457 F = 2.428* *Sig. at .05 n = 310		

3. Prop Pilots

Table 4.5 summarizes the OLS results for prop pilots. ACP, MSR2, MSR3, and UNEMP were all statistically significant with the expected signs. VSI/SSB and IRAD were not statistically significant.

Table 4.5 OLS Results for Prop Pilots

MODEL 5 CR PROP PILOT		
VARIABLE	COEFF	t-VALUE
ACP	7.12	1.667*
VSI/SSB	5.94	1.479
IRAD	0.03	0.010
MSR2	-16.08	-11.029*
MSR3	3.11	1.852*
UNEMP	1.46	2.508*
CONSTANT	78.27	20.519
Rsqu. = .3548 F = 27.86* *Sig. at .05 n = 310		

4. Prop NFOs

Table 4.6 summarizes the OLS results for prop NFOs. The ACP and MSR3 variables were statistically significant, and had the hypothesized signs. The remaining explanatory variables were not statistically significant.

Table 4.6 OLS Results for Prop NFOs

MODEL 6 CR PROP NFO		
VARIABLE	COEFF	t-VALUE
ACP	17.73	2.014*
VSI/SSB	1.94	0.316
IRAD	-3.50	-0.711
MSR2	4.63	1.486
MSR3	9.74	3.038*
UNEMP	-0.43	-0.401
CONSTANT	87.29	12.446
Rsq. = .0538 n = 311	F = 2.89*	*Sig. at .05

5. Jet NFOs

Table 4.7 summarizes the OLS results for jet NFOs. The ACP and MSR3 variables were statistically significant. The remaining variables were not statistically significant. As with helo pilots, the MSR2 coefficient had a positive sign, which was contrary to expectations.

Table 4.7 OLS Results for Jet NFOs

MODEL 7 CR JET NFO		
VARIABLE	COEFF	t-VALUE
ACP	20.49	1.67*
VSI/SSB	8.13	0.787
IRAD	-7.25	-1.023
MSR2	6.20	1.315
MSR3	12.16	2.557*
UNEMP	-1.16	-0.762
CONSTANT	90.00	8.918
Rsqr. = .0396 n = 311	F = 2.10*	*Sig. at .05

C. DISCUSSION OF THE EFFECTS OF THE EXPLANATORY VARIABLES

1. Aviation Continuation Pay Program (ACP)

The ACP program variable, *ACP*, was statistically significant in the combined pilot and NFO models, with the coefficient indicating a direct relationship between the number of bonuses available and the grouped fiscal year continuation rates for pilots and NFOs. This result supports the hypothesized relationship. When the models were run separately for aircraft type, the ACP variable was significant in all models with the exception of jet pilots. This outcome indicates that an increase in the number of bonuses available to a community significantly increases the continuation rate of that community, averaged over year group and fiscal year.

2. Voluntary Separation Incentive Program (VSI)

VSI/SSB was statistically insignificant in all models but with a positive coefficient instead of the hypothesized negative value. This may be explained by the fact that this policy was targeted to a very small group of officers. It affected only 534 aviators (3.7 percent of dataset) and in only one fiscal year (1993). Also, the omission of other variables that influence CR and interact with *VSI/SSB* (i.e., years of service) will result in an upward bias of the *VSI/SSB* variable.

3. Involuntary Reduction in Active Duty Policy (IRAD)

The IRAD policy variable, *IRAD*, was not statistically significant in any model. This may be due to the small percentage of cohorts in the dataset affected by the IRAD (YG82 to YG87) and by the assumption that only 30 percent of those cohorts are affected. However, the signs of the coefficients were negative, as hypothesized. The results indicate that, with the IRAD policy in effect there is an observed decrease in the continuation rate.

4. MSR2

Having time in service between MSR0 and MSR+2 was significant for jet and prop pilots only. The results indicate a significant difference in retention behavior

between pilots and NFOs, and between fixed wing and helicopter communities. For helo pilots and NFOs, not only was this variable insignificant, but the sign of the coefficient was positive. The historically large losses of aviators during this period of time are probably best attributed to the substantially larger separation rates in the jet and prop pilot communities due to the draw of the commercial airline industry. Having specialized skills with severely limited civilian applicability, helo pilots and NFOs are less apt than fixed wing pilots to separate at this time.

5. MSR3

For both pilots and NFOs, being at the career point between MSR+3 and MSR+5 (approximately equal to YOS 9-11) is a significant factor explaining continuation. There is a direct relationship, indicating that, as time-since-MSR increases beyond the MSR2 period, the continuation rate will increase, as hypothesized.

6. Civilian Unemployment

The annual civilian unemployment variable was significant only in the model for prop pilots. The coefficient indicates a direct relationship between the annual unemployment rate and the continuation rate of prop pilots. The fact that the skills required for flying multi-engine propeller aircraft and commercial airline aircraft are similar, results in prop pilots being a major source of new hires for the airline industry. Although jet pilots also fly fixed-wing aircraft, there is a significant difference in aircraft type, thus it is not as easy for jet pilots to transfer their skills to the commercial airline industry. As annual unemployment increases, it is be assumed that airline hiring rates are lower, resulting in fewer prop pilots separating.

D. GOODNESS-OF-FIT OF THE OLS MODELS

The model R^2 , defined as the coefficient of determination, is one measure of the goodness-of-fit of a regression model. Specifically, it measures the proportion of the total variation in the dependent variable (CR) explained by the regression model. The R^2 for each model is displayed in Tables 4.1 through 4.7. The low R^2 values of the models are a function of attempting only to measure the effect of various policies on the continuation

rate. The models probably suffer from specification bias because they omit some important factors that determine retention behavior (e.g., commercial airline hiring rates).

The F-value of the model is a measure of the overall significance of the estimated regression. It tests the null hypothesis that all of the estimated coefficients are jointly equal to zero. The calculated F-value for each model is displayed in Tables 4.1 through 4.7. The calculated F-value of each model is compared to the critical F-statistic of 2.10 (at the .05 level of significance). A calculated value greater than the critical value indicates that the null hypothesis can be rejected. Thus, despite the low R^2 values, the models are a significant improvement in explaining the variation in CR.

V. CONCLUSIONS

This thesis examines the relationship between various Navy downsizing policies introduced in the early 1990's and the continuation rate of Naval aviators. A unique database was developed for the analysis and will provide future retention research with the "grouped" data necessary to study aviator continuation rates. The analysis found that a statistically significant positive relationship exists between an increase in the amount of ACP bonuses and the continuation rate, within the pilot and NFO communities. Specifically, the study found that increasing the bonuses to the pilot community by one percent would increase the pilot continuation rate by 17.66 percent. At the same time, increasing the percentage of bonuses available to the NFO community by one percent would increase the NFO continuation rate by 20.68 percent. The VSI/SSB and IRAD downsizing policies were found to be statistically insignificant. The following list summarizes the estimated effect of the bonus on the pilot and NFO communities:

1. Jet pilot: a one percent increase in bonuses available to jet pilots resulted in a 15.7 percent increase in the jet pilot mean CR.
2. Helo pilot: a one percent increase in bonuses available to helo pilots resulted in a 21.7 percent increase in the helo pilot mean CR.
3. Prop pilot: a one percent increase in bonuses available to prop pilots resulted in a 8.1 percent increase in the prop pilot mean CR.
4. Jet NFO: a one percent increase in bonuses available to jet NFOs resulted in a 22.2 percent increase in the jet NFO mean CR.
5. Prop NFO: a one percent increase in bonuses available to prop NFOs resulted in a 19.6 percent increase in the prop NFO mean CR.

By isolating the effects of the various downsizing policies, estimated adjustments can now be applied to the historical rates to identify the "true" underlying retention rates. The following example illustrates the adjustment process. The CR for pilots in year group 85 for fiscal 1993 was 71.53 percent (see CRs in Appendix A). The variable ACP

estimated coefficient from the pilot model is 15.12. Since the bonus increases retention, the adjustment is made by subtracting the coefficient value from the calculated rate. This results in an adjusted CR of 56.41 percent. The next adjustment is applied for the IRAD policy. Since the IRAD decreased normal retention, the adjustment is now made by adding the estimated coefficient value (3.79) to the CR of 56.41. The adjusted CR is now 60.2 percent. Because of the problems encountered in the model with the VSI/SSB variable, the adjustment for this policy was made by removing VSI/SSB takers from the 85 pilot cohort and then calculating the rate. This resulted in a 12.32 percent increase in the rate. Applying this adjustment to the ACP and IRAD adjusted CR of 60.2, resulted in the underlying baseline CR of 67.62. As can be seen the underlying retention rate is lower than the unadjusted reported rate of 71.53. This process can be applied to other cohorts in the same manner and the adjusted continuation rates can be used to calculate adjusted CCRs or MSR survival rates that will provide manpower planners and policymakers with the "true" underlying retention rate and an indicator of various downsizing policy effects.

A. SPECIFICATION BIAS

The omission of relevant variables in specifying the model may result in bias. Environmental variables, such as airline hiring rates and military/civilian pay ratios among other things, would also influence the continuation rate. The omission of these "influential" variables from the model specification would theoretically bias the resultant coefficient values. The consequences of omitting a relevant variable are as follows:

1. If the left out variable is correlated with the VSI/SSB variable, the estimated coefficients of the model will be biased as well as inconsistent.
2. The usual confidence interval and hypotheses testing procedures are likely to give misleading conclusions about the statistical significance of the estimated parameters.

3. The VSI/SSB variable will represent not only its direct effect on CR but also its indirect effect (via the omitted relevant variable) on CR. (Gujarati, 1988)

B. RECOMMENDATIONS

Future research should continue by adding new data to the file as the downsizing progresses. This will enable the model to be further refined. The model should also be expanded by adding the "environmental" variables mentioned above. The model should also be run at the level of the aviation subcommunity (i.e., VF, VA, HSL, VS, etc.), since this is the point at which the bonus is applied. Finally, the cohort database developed for this research should be merged with the OMF individual data to specify and estimate a retention model for aviators on individual data.

C. SUMMARY

Monitoring and correctly interpreting trends in aviator retention, along with understanding the impact of Navy policies, is a critical manpower function. This analysis identifies the statistical relationships between the various downsizing policies and the underlying voluntary survival rate of Naval aviators. This information provides manpower planners and policymakers with adjusted continuation rates that should enable a more accurate and reliable forecast of future aviator retention. Ultimately, this information should also provide a more refined force-shaping tool for determining and implementing effective aviator retention policies.

APPENDIX A. COHORT CONTINUATION RATES³

³Voluntary Rates; Involuntary Separations and Obligated Service Restricted Out; other restrictions noted in text.

Fy93										NFO					
	JET									PROP			NFO		
YG	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR
92	0	0	-	1	1	1.0000			1.0000			1	1	1.0000	
91	9	9	1.0000	26	26	1.0000			1.0000			35	35	1.0000	
90	23	23	1.0000	41	41	0.9512			0.9512			64	64	0.9688	
89	33	33	1.0000	24	24	1.0000			1.0000			57	57	1.0000	
88	9	7	0.7778	28	28	1.0000			1.0000			37	35	0.9459	
87	58	58	1.0000	131	126	0.9618			0.9618			189	184	0.9735	
86	177	159	0.8983	225	186	0.8267			0.8267			402	345	0.8582	
85	202	122	0.6040	249	173	0.6948			0.6948			451	295	0.6541	
84	133	91	0.6842	177	131	0.7401			0.7401			310	222	0.7161	
83	92	78	0.8478	172	148	0.8605			0.8605			264	226	0.8561	
82	60	54	0.9000	123	119	0.9675			0.9675			183	173	0.9454	
81	59	58	0.9831	150	140	0.9333			0.9333			209	198	0.9474	
80	47	44	0.9362	174	163	0.9368			0.9368			221	207	0.9367	
79	24	21	0.8750	160	154	0.9625			0.9625			184	175	0.9511	
78	17	16	0.9412	127	118	0.9291			0.9291			144	134	0.9306	
77	19	19	1.0000	127	117	0.9213			0.9213			146	136	0.9315	
76	11	11	1.0000	82	73	0.8902			0.8902			93	84	0.9032	
75	15	12	0.8000	146	131	0.8973			0.8973			161	143	0.8882	
74	16	14	0.8750	154	106	0.6883			0.6883			170	120	0.7059	
73	18	13	0.7222	125	80	0.6400			0.6400			143	93	0.6503	
72	9	4	0.4444	55	30	0.5455			0.5455			64	34	0.5313	
71	7	3	0.4286	65	42	0.6462			0.6462			72	45	0.6250	
70	0	0	-	56	35	0.6250			0.6250			56	35	0.6250	
69	5	3	0.6000	39	20	0.5128			0.5128			44	23	0.5227	
68	5	2	0.4000	19	12	0.6316			0.6316			24	14	0.5833	
67	1	1	1.0000	16	9	0.5625			0.5625			17	10	0.5882	
66	0	0	-	20	11	0.5500			0.5500			20	11	0.5500	
65	0	0	-	4	3	0.7500			0.7500			4	3	0.7500	
64	0	0	-	4	3	0.7500			0.7500			4	3	0.7500	
63	0	0	-	5	2	0.4000			0.4000			5	2	0.4000	
62	0	0	-	0	0	-			-			0	0	-	
61	0	0	-	0	0	-			-			0	0	-	
60	0	0	-	2	1	0.5000			0.5000			2	1	0.5000	
	1049	855		2727	2251							3776	3106		

FY92					PILOT															
	HELO				JET				PROP				PILOT							
YG	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV
91	5	5	1.0000	5	5	1.0000	5	5	1.0000	8	8	1.0000	18	18	1.0000	18	18	1.0000	18	18
90	11	10	0.9091	2	2	1.0000	8	8	1.0000	8	8	1.0000	21	20	0.9524	21	20	0.9524	21	20
89	16	16	1.0000	29	29	1.0000	18	18	1.0000	18	18	1.0000	63	63	1.0000	63	63	1.0000	63	63
88	20	20	1.0000	41	40	0.9756	31	30	0.9677	7	7	1.0000	45	45	1.0000	45	45	1.0000	45	45
87	30	30	1.0000	94	84	0.8936	205	173	0.8439	31	30	0.9677	102	100	0.9804	102	100	0.9804	102	100
86	183	175	0.9563	326	254	0.7791	299	235	0.7860	205	173	0.8439	482	432	0.8963	482	432	0.8963	482	432
85	213	178	0.8357	109	85	0.7798	145	102	0.7034	94	84	0.8936	838	667	0.7959	838	667	0.7959	838	667
84	127	97	0.7638	93	60	0.6452	148	111	0.7500	254	235	0.7860	381	284	0.7454	381	284	0.7454	381	284
83	117	109	0.9316	100	83	0.8300	152	143	0.9408	85	60	0.7454	358	280	0.7821	358	280	0.7821	358	280
82	103	103	1.0000	61	57	0.9344	135	130	0.9630	148	111	0.7500	355	329	0.9268	355	329	0.9268	355	329
81	98	98	1.0000	32	28	0.8750	110	107	0.9727	100	83	0.8300	294	285	0.9694	294	285	0.9694	294	285
80	39	39	1.0000	63	60	0.9524	117	113	0.9658	135	130	0.9630	181	174	0.9613	181	174	0.9613	181	174
79	33	32	0.9697	35	34	0.9714	160	155	0.9688	110	107	0.9727	205	205	0.9624	205	205	0.9624	205	205
78	24	23	0.9583	26	26	1.0000	159	154	0.9686	160	155	0.9688	219	212	0.9680	219	212	0.9680	219	212
77	16	16	1.0000	12	11	0.9167	90	90	1.0000	159	154	0.9686	201	196	0.9751	201	196	0.9751	201	196
76	10	9	0.9000	20	19	0.9500	189	182	0.9630	90	90	1.0000	112	110	0.9821	112	110	0.9821	112	110
75	19	19	1.0000	23	23	1.0000	225	218	0.9689	189	182	0.9630	228	220	0.9649	228	220	0.9649	228	220
74	26	25	0.9615	33	27	0.8182	188	157	0.8351	225	218	0.9689	274	266	0.9708	274	266	0.9708	274	266
73	25	23	0.9200	17	14	0.8235	162	116	0.7160	188	157	0.8351	246	207	0.8415	246	207	0.8415	246	207
72	16	14	0.8750	3	2	0.6667	100	77	0.7700	162	116	0.7160	195	144	0.7385	195	144	0.7385	195	144
71	10	7	0.7000	8	8	1.0000	126	103	0.8175	3	2	0.6667	113	86	0.7611	113	86	0.7611	113	86
70	5	5	1.0000	15	14	0.9333	134	113	0.8433	8	8	1.0000	139	116	0.8345	139	116	0.8345	139	116
69	4	3	0.7500	6	5	0.8333	97	81	0.8351	15	14	0.9333	153	130	0.8497	153	130	0.8497	153	130
68	4	2	0.5000	5	4	0.8000	103	86	0.8350	6	5	0.8333	107	88	0.8224	107	88	0.8224	107	88
67	3	1	0.3333	6	4	0.8000	77	54	0.7013	5	4	0.8000	111	91	0.8198	111	91	0.8198	111	91
66	2	0	0.0000	3	1	0.3333	39	24	0.6154	6	6	1.0000	85	60	0.7059	85	60	0.7059	85	60
65	0	0	0.0000	3	3	1.0000	27	24	0.8889	1	1	0.3333	42	25	0.5952	42	25	0.5952	42	25
64	1	0	0.0000	3	3	1.0000	27	24	0.8889	3	3	1.0000	31	27	0.8710	31	27	0.8710	31	27
63	1	1	1.0000	2	2	1.0000	21	18	0.8571	27	24	0.8889	24	21	0.8750	24	21	0.8750	24	21
62	0	0	0.0000	1	1	1.0000	14	13	0.9286	2	2	1.0000	15	14	0.9333	15	14	0.9333	15	14
61	0	0	0.0000	0	0	0.0000	5	4	0.8000	1	1	1.0000	5	4	0.8000	5	4	0.8000	5	4
60	0	0	0.0000	0	0	0.0000	7	7	1.0000	0	0	0.0000	7	7	1.0000	7	7	1.0000	7	7
	1161	1060		1191	1005		3306	2861					5658	4926						

Fy92										NFO								
	JET						PROP						NFO					
YG	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR
91	0	0	-	1	1	1.0000				1	1	1.0000	1	1	1.0000			
90	18	18	1.0000	17	16	0.9412				35	35	0.9714	34	34	0.9714			
89	11	11	1.0000	5	5	1.0000				16	16	1.0000	16	16	1.0000			
88	5	5	1.0000	20	20	1.0000				25	25	1.0000	25	25	1.0000			
87	11	10	0.9091	52	52	1.0000				63	62	0.9841	62	62	0.9841			
86	92	90	0.9783	114	109	0.9561				206	199	0.9660	199	199	0.9660			
85	213	200	0.9390	255	233	0.9137				468	433	0.9252	433	433	0.9252			
84	165	127	0.7697	203	159	0.7833				368	286	0.7772	286	286	0.7772			
83	113	93	0.8230	202	174	0.8614				315	267	0.8476	267	267	0.8476			
82	79	77	0.9747	146	141	0.9658				225	218	0.9689	218	218	0.9689			
81	69	69	1.0000	168	159	0.9464				237	228	0.9620	228	228	0.9620			
80	49	47	0.9592	179	168	0.9385				228	215	0.9430	215	215	0.9430			
79	29	28	0.9655	164	155	0.9451				193	183	0.9482	183	183	0.9482			
78	21	20	0.9524	126	123	0.9762				147	143	0.9728	143	143	0.9728			
77	21	21	1.0000	131	123	0.9389				152	144	0.9474	144	144	0.9474			
76	13	13	1.0000	84	75	0.8929				97	88	0.9072	88	88	0.9072			
75	13	12	0.9231	156	145	0.9295				169	157	0.9290	157	157	0.9290			
74	16	15	0.9375	167	153	0.9162				183	168	0.9180	168	168	0.9180			
73	24	22	0.9167	156	135	0.8654				180	157	0.8722	157	157	0.8722			
72	13	10	0.7692	73	51	0.6986				86	61	0.7093	61	61	0.7093			
71	8	7	0.8750	78	67	0.8590				86	74	0.8605	74	74	0.8605			
70	0	0	-	67	54	0.8060				67	54	0.8060	54	54	0.8060			
69	5	5	1.0000	54	44	0.8148				59	49	0.8305	49	49	0.8305			
68	5	5	1.0000	28	22	0.7857				33	27	0.8182	27	27	0.8182			
67	0	0	-	19	14	0.7368				19	14	0.7368	14	14	0.7368			
66	0	0	-	30	19	0.6333				30	19	0.6333	19	19	0.6333			
65	0	0	-	9	3	0.3333				9	3	0.3333	3	3	0.3333			
64	0	0	-	6	4	0.6667				6	4	0.6667	4	4	0.6667			
63	1	1	1.0000	7	7	1.0000				8	8	1.0000	8	8	1.0000			
62	0	0	-	0	0	-				0	0	-	0	0	-			
61	0	0	-	1	0	-				1	0	-	0	0	-			
60	0	0	-	2	2	1.0000				2	2	1.0000	2	2	1.0000			
	994	906		2720	2433					3714	3339							

Fy91					PILOT															
	HELO				JET				PROP				PILOT							
YG	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV
90	6	5	0.8333	2	1	0.5000	4	4	1.0000	12	10	0.8333								
89	12	12	1.0000	30	30	1.0000	14	14	1.0000	56	56	1.0000								
88	11	11	1.0000	7	7	1.0000	5	5	1.0000	23	23	1.0000								
87	15	15	1.0000	41	41	1.0000	22	19	0.8636	78	75	0.9615								
86	18	18	1.0000	20	20	1.0000	34	32	0.9412	72	70	0.9722								
85	161	145	0.9006	178	150	0.8427	244	172	0.7049	583	467	0.8010								
84	153	129	0.8431	139	100	0.7194	194	122	0.6289	486	351	0.7222								
83	131	111	0.8473	138	85	0.6159	194	127	0.6546	463	323	0.6976								
82	122	114	0.9344	131	96	0.7328	173	150	0.8671	426	360	0.8451								
81	118	113	0.9576	80	70	0.8750	136	124	0.9118	334	307	0.9192								
80	44	42	0.9545	39	35	0.8974	114	105	0.9211	197	182	0.9239								
79	36	34	0.9444	81	71	0.8765	120	107	0.8917	237	212	0.8945								
78	33	25	0.7576	62	49	0.7903	155	144	0.9290	250	218	0.8720								
77	19	19	1.0000	48	42	0.8750	153	145	0.9477	220	206	0.9364								
76	10	9	0.9000	32	26	0.8125	78	76	0.9744	120	111	0.9250								
75	18	18	1.0000	46	43	0.9348	174	165	0.9483	238	226	0.9496								
74	29	25	0.8621	55	52	0.9455	206	196	0.9515	290	273	0.9414								
73	27	23	0.8519	62	54	0.8710	173	159	0.9191	262	236	0.9008								
72	24	22	0.9167	47	40	0.8511	168	143	0.8512	239	205	0.8577								
71	19	12	0.6316	36	30	0.8333	105	68	0.6476	160	110	0.6875								
70	7	5	0.7143	47	45	0.9574	108	95	0.8796	162	145	0.8951								
69	8	6	0.7500	54	50	0.9259	126	107	0.8492	188	163	0.8670								
68	6	4	0.6667	44	37	0.8409	78	68	0.8718	128	109	0.8516								
67	5	3	0.6000	49	46	0.9388	86	75	0.8721	140	124	0.8857								
66	4	3	0.7500	50	46	0.9200	56	42	0.7500	110	91	0.8273								
65	1	1	1.0000	25	20	0.8000	33	24	0.7273	59	45	0.7627								
64	1	1	1.0000	21	17	0.8095	18	12	0.6667	40	30	0.7500								
63	2	1	0.5000	12	10	0.8333	18	14	0.7778	32	25	0.7813								
62	3	3	1.0000	18	12	0.6667	13	10	0.7692	34	25	0.7353								
61	0	0	0.0000	2	2	1.0000	7	5	0.7143	9	7	0.7778								
60	1	0	0.0000	6	5	0.8333	4	3	0.7500	11	8	0.7273								
	1044	929		1602	1332		3013	2532		5659	4793									

Fy91					NFO							
	JET				PROP				NFO			
YG	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR
90	4	4	1.0000	13	13	1.0000	17	17	1.0000	17	17	1.0000
89	3	2	0.6667	4	4	1.0000	7	7	0.8571	6	6	0.8571
88	4	4	1.0000	18	18	1.0000	22	22	1.0000	22	22	1.0000
87	3	3	1.0000	33	32	0.9697	36	35	0.9722	36	35	0.9722
86	11	11	1.0000	28	28	1.0000	39	39	1.0000	39	39	1.0000
85	133	126	0.9474	157	148	0.9427	290	274	0.9448	290	274	0.9448
84	190	172	0.9053	210	194	0.9238	400	366	0.9150	400	366	0.9150
83	135	112	0.8296	213	185	0.8685	348	297	0.8534	348	297	0.8534
82	86	83	0.9651	160	146	0.9125	246	229	0.9309	246	229	0.9309
81	83	80	0.9639	170	163	0.9588	253	243	0.9605	253	243	0.9605
80	95	58	0.6105	174	171	0.9828	269	229	0.8513	269	229	0.8513
79	44	40	0.9091	158	151	0.9557	202	191	0.9455	202	191	0.9455
78	35	33	0.9429	117	114	0.9744	152	147	0.9671	152	147	0.9671
77	33	31	0.9394	126	123	0.9762	159	154	0.9686	159	154	0.9686
76	23	23	1.0000	74	70	0.9459	97	93	0.9588	97	93	0.9588
75	24	23	0.9583	150	141	0.9400	174	164	0.9425	174	164	0.9425
74	34	30	0.8824	156	146	0.9359	190	176	0.9263	190	176	0.9263
73	50	48	0.9600	136	124	0.9118	186	172	0.9247	186	172	0.9247
72	34	31	0.9118	82	68	0.8293	116	99	0.8534	116	99	0.8534
71	30	24	0.8000	82	68	0.8293	112	92	0.8214	112	92	0.8214
70	19	16	0.8421	65	54	0.8308	84	70	0.8333	84	70	0.8333
69	21	17	0.8095	55	47	0.8545	76	64	0.8421	76	64	0.8421
68	16	14	0.8750	29	19	0.6552	45	33	0.7333	45	33	0.7333
67	7	6	0.8571	20	18	0.9000	27	24	0.8889	27	24	0.8889
66	20	14	0.7000	20	18	0.9000	40	32	0.8000	40	32	0.8000
65	4	1	0.2500	11	6	0.5455	15	7	0.4667	15	7	0.4667
64	1	1	1.0000	7	5	0.7143	8	6	0.7500	8	6	0.7500
63	8	5	0.6250	5	5	1.0000	13	10	0.7692	13	10	0.7692
62	1	0	-	2	0	-	3	0	-	3	0	-
61	1	0	-	1	0	-	2	0	-	2	0	-
60	1	1	1.0000	1	1	1.0000	2	2	1.0000	2	2	1.0000
	1153	1013		2477	2280		3630	3293		3630	3293	

Fy90							PILOT											
	HELO						JET						PROP					
	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR
YG																		
89	10	10	1.0000	2	2	1.0000		7	7	1.0000	19	19	1.0000					
88	8	8	1.0000	4	4	1.0000		4	4	1.0000	16	16	1.0000					
87	13	13	1.0000	39	39	1.0000		17	16	0.9412	69	68	0.9855					
86	21	21	1.0000	15	15	1.0000		29	28	0.9655	65	64	0.9846					
85	7	6	0.8571	38	37	0.9737		14	13	0.9286	59	56	0.9492					
84	109	103	0.9450	47	31	0.6596		139	102	0.7338	295	236	0.8000					
83	184	157	0.8533	190	127	0.6684		230	152	0.6609	604	436	0.7219					
82	158	137	0.8671	190	133	0.7000		196	137	0.6990	544	407	0.7482					
81	186	173	0.9301	106	91	0.8585		123	111	0.9024	415	375	0.9036					
80	71	70	0.9859	51	44	0.8627		91	89	0.9780	213	203	0.9531					
79	71	70	0.9859	79	76	0.9620		84	82	0.9762	234	228	0.9744					
78	44	42	0.9545	72	58	0.8056		135	127	0.9407	251	227	0.9044					
77	54	51	0.9444	56	46	0.8214		119	116	0.9748	229	213	0.9301					
76	27	26	0.9630	33	30	0.9091		61	61	1.0000	121	117	0.9669					
75	51	48	0.9412	56	53	0.9464		133	127	0.9549	240	228	0.9500					
74	62	60	0.9677	52	52	1.0000		173	167	0.9653	287	279	0.9721					
73	54	50	0.9259	61	56	0.9180		144	135	0.9375	259	241	0.9305					
72	40	38	0.9500	41	41	1.0000		147	142	0.9660	228	221	0.9693					
71	53	43	0.8113	29	26	0.8966		104	83	0.7981	186	152	0.8172					
70	34	25	0.7353	48	35	0.7292		135	98	0.7259	217	158	0.7281					
69	23	19	0.8261	63	54	0.8571		128	105	0.8203	214	178	0.8318					
68	13	11	0.8462	41	37	0.9024		96	82	0.8542	150	130	0.8667					
67	21	16	0.7619	50	49	0.9800		93	82	0.8817	164	147	0.8963					
66	14	14	1.0000	52	48	0.9231		65	53	0.8154	131	115	0.8779					
65	2	0	0.0000	33	27	0.8182		45	37	0.8222	80	64	0.8000					
64	2	2	1.0000	30	27	0.9000		24	18	0.7500	56	47	0.8393					
63	5	3	0.6000	18	13	0.7222		28	22	0.7857	51	38	0.7451					
62	4	3	0.7500	20	18	0.9000		20	18	0.9000	44	39	0.8864					
61	1	1	1.0000	11	6	0.5455		17	13	0.7647	29	20	0.6897					
60	3	1	0.3333	7	6	0.8571		7	5	0.7143	17	12	0.7059					
	1345	1221		1534	1281		2608	2232		5487	4734							

Fy90										NFO								
	JET									PROP						NFO		
YG	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR
89	1	1	1.0000	1	1	1.0000	1	1	1.0000	1	1	1.0000	2	2	1.0000			
88	5	5	1.0000	19	19	1.0000	19	19	1.0000	24	24	1.0000	24	24	1.0000			
87	2	2	1.0000	24	24	1.0000	24	24	1.0000	26	26	1.0000	26	26	1.0000			
86	7	7	1.0000	25	25	1.0000	25	25	1.0000	32	32	1.0000	32	32	1.0000			
85	5	5	1.0000	5	5	1.0000	5	5	1.0000	10	10	1.0000	10	10	1.0000			
84	148	139	0.9392	130	126	0.9692	130	126	0.9692	278	265	0.9532	278	265	0.9532			
83	192	173	0.9010	189	174	0.9206	189	174	0.9206	381	347	0.9108	381	347	0.9108			
82	127	102	0.8031	166	137	0.8253	166	137	0.8253	293	239	0.8157	293	239	0.8157			
81	141	132	0.9362	182	171	0.9396	182	171	0.9396	323	303	0.9381	323	303	0.9381			
80	97	96	0.9897	157	155	0.9873	157	155	0.9873	254	251	0.9882	254	251	0.9882			
79	58	57	0.9828	149	142	0.9530	149	142	0.9530	207	199	0.9614	207	199	0.9614			
78	43	41	0.9535	117	111	0.9487	117	111	0.9487	160	152	0.9500	160	152	0.9500			
77	59	59	1.0000	100	96	0.9600	100	96	0.9600	159	155	0.9748	159	155	0.9748			
76	27	27	1.0000	74	70	0.9459	74	70	0.9459	101	97	0.9604	101	97	0.9604			
75	49	46	0.9388	137	129	0.9416	137	129	0.9416	186	175	0.9409	186	175	0.9409			
74	47	45	0.9574	156	139	0.8910	156	139	0.8910	203	184	0.9064	203	184	0.9064			
73	53	52	0.9811	138	132	0.9565	138	132	0.9565	191	184	0.9634	191	184	0.9634			
72	35	34	0.9714	82	75	0.9146	82	75	0.9146	117	109	0.9316	117	109	0.9316			
71	33	28	0.8485	108	90	0.8333	108	90	0.8333	141	118	0.8369	141	118	0.8369			
70	23	17	0.7391	80	60	0.7500	80	60	0.7500	103	77	0.7476	103	77	0.7476			
69	27	24	0.8889	63	50	0.7937	63	50	0.7937	90	74	0.8222	90	74	0.8222			
68	21	18	0.8571	39	28	0.7179	39	28	0.7179	60	46	0.7667	60	46	0.7667			
67	10	10	1.0000	21	18	0.8571	21	18	0.8571	31	28	0.9032	31	28	0.9032			
66	23	21	0.9130	28	24	0.8571	28	24	0.8571	51	45	0.8824	51	45	0.8824			
65	7	6	0.8571	27	21	0.7778	27	21	0.7778	34	27	0.7941	34	27	0.7941			
64	4	2	0.5000	20	17	0.8500	20	17	0.8500	24	19	0.7917	24	19	0.7917			
63	8	7	0.8750	12	10	0.8333	12	10	0.8333	20	17	0.8500	20	17	0.8500			
62	2	1	0.5000	10	4	0.4000	10	4	0.4000	12	5	0.4167	12	5	0.4167			
61	2	0	-	7	3	0.4286	7	3	0.4286	9	3	0.3333	9	3	0.3333			
60	1	1	1.0000	3	1	0.3333	3	1	0.3333	4	2	0.5000	4	2	0.5000			
	1257	1158		2269	2056		2269	2056		3526	3214		3526	3214				

Fy88																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

FY88							JET						NFO					
	YQ	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV
87	0	0	0	-	0	0	-	0	0	0	0	0	-	0	0	-	0	0
86	1	1	1	1.0000	11	11	1.0000	11	11	1.0000	12	12	1.0000	12	12	1.0000	12	1.0000
85	1	1	1	1.0000	2	2	1.0000	2	2	1.0000	3	3	1.0000	3	3	1.0000	3	1.0000
84	2	2	2	1.0000	3	3	1.0000	3	3	1.0000	5	5	1.0000	5	5	1.0000	5	1.0000
83	30	30	30	1.0000	25	24	0.9600	25	24	0.9600	55	54	0.9818	55	54	0.9818	55	0.9818
82	130	117	117	0.9000	133	122	0.9173	133	122	0.9173	263	239	0.9087	263	239	0.9087	263	0.9087
81	207	185	185	0.8937	212	185	0.8726	212	185	0.8726	419	370	0.8831	419	370	0.8831	419	0.8831
80	175	155	155	0.8857	200	169	0.8450	200	169	0.8450	375	324	0.8640	375	324	0.8640	375	0.8640
79	92	90	90	0.9783	182	179	0.9835	182	179	0.9835	274	269	0.9818	274	269	0.9818	274	0.9818
78	68	66	66	0.9706	125	123	0.9840	125	123	0.9840	193	189	0.9793	193	189	0.9793	193	0.9793
77	69	69	69	1.0000	105	98	0.9333	105	98	0.9333	174	167	0.9598	174	167	0.9598	174	0.9598
76	32	31	31	0.9688	74	70	0.9459	74	70	0.9459	106	101	0.9528	106	101	0.9528	106	0.9528
75	50	49	49	0.9800	141	137	0.9716	141	137	0.9716	191	186	0.9738	191	186	0.9738	191	0.9738
74	53	50	50	0.9434	170	163	0.9588	170	163	0.9588	223	213	0.9552	223	213	0.9552	223	0.9552
73	59	56	56	0.9492	140	135	0.9643	140	135	0.9643	199	191	0.9598	199	191	0.9598	199	0.9598
72	34	33	33	0.9706	91	90	0.9890	91	90	0.9890	125	123	0.9840	125	123	0.9840	125	0.9840
71	36	35	35	0.9722	111	110	0.9910	111	110	0.9910	147	145	0.9864	147	145	0.9864	147	0.9864
70	32	31	31	0.9688	105	95	0.9048	105	95	0.9048	137	126	0.9197	137	126	0.9197	137	0.9197
69	51	41	41	0.8039	103	82	0.7961	103	82	0.7961	154	123	0.7987	154	123	0.7987	154	0.7987
68	31	26	26	0.8387	58	43	0.7414	58	43	0.7414	89	69	0.7753	89	69	0.7753	89	0.7753
67	12	10	10	0.8333	35	25	0.7143	35	25	0.7143	47	35	0.7447	47	35	0.7447	47	0.7447
66	23	21	21	0.9130	36	30	0.8333	36	30	0.8333	59	51	0.8644	59	51	0.8644	59	0.8644
65	6	4	4	0.6667	39	36	0.9231	39	36	0.9231	45	40	0.8889	45	40	0.8889	45	0.8889
64	8	5	5	0.6250	28	24	0.8571	28	24	0.8571	36	29	0.8056	36	29	0.8056	36	0.8056
63	11	10	10	0.9091	19	16	0.8421	19	16	0.8421	30	26	0.8667	30	26	0.8667	30	0.8667
62	4	3	3	0.7500	19	14	0.7368	19	14	0.7368	23	17	0.7391	23	17	0.7391	23	0.7391
61	4	4	4	1.0000	10	7	0.7000	10	7	0.7000	14	11	0.7857	14	11	0.7857	14	0.7857
60	3	3	3	1.0000	7	5	0.7143	7	5	0.7143	10	8	0.8000	10	8	0.8000	10	0.8000
	1224	1128			2184	1998		2184	1998		3408	3126		3408	3126		3408	3126

FY87				HELO			PILOT						PROP						PILOT		
YG	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR
86	6	6	1.0000	4	4	1.0000	4	4	1.0000	10	10	1.0000	10	10	1.0000	20	20	1.0000	20	20	1.0000
85	4	4	1.0000	7	7	1.0000	7	7	1.0000	7	7	1.0000	7	7	1.0000	18	18	1.0000	18	18	1.0000
84	3	3	1.0000	0	0	-	0	0	-	2	2	1.0000	2	2	1.0000	5	5	1.0000	5	5	1.0000
83	7	7	1.0000	2	2	1.0000	2	2	1.0000	6	6	1.0000	6	6	1.0000	15	15	1.0000	15	15	1.0000
82	43	42	0.9767	2	2	1.0000	2	2	1.0000	49	44	0.8980	44	44	0.8980	94	88	0.9362	94	88	0.9362
81	219	208	0.9498	115	80	0.6957	115	80	0.6957	215	127	0.5907	127	127	0.5907	549	415	0.7559	549	415	0.7559
80	124	117	0.9435	136	103	0.7574	136	103	0.7574	108	84	0.7778	84	84	0.7778	368	304	0.8261	368	304	0.8261
79	114	107	0.9386	151	128	0.8477	151	128	0.8477	82	71	0.8659	71	71	0.8659	347	306	0.8818	347	306	0.8818
78	90	88	0.9778	105	97	0.9238	105	97	0.9238	117	114	0.9744	114	114	0.9744	312	299	0.9583	312	299	0.9583
77	80	78	0.9750	78	76	0.9744	78	76	0.9744	114	111	0.9737	111	111	0.9737	272	265	0.9743	272	265	0.9743
76	38	36	0.9474	41	40	0.9756	41	40	0.9756	63	59	0.9365	59	59	0.9365	142	135	0.9507	142	135	0.9507
75	69	69	1.0000	68	65	0.9559	68	65	0.9559	125	122	0.9760	122	122	0.9760	262	256	0.9771	262	256	0.9771
74	102	101	0.9902	51	51	1.0000	51	51	1.0000	154	144	0.9351	144	144	0.9351	307	296	0.9642	307	296	0.9642
73	74	70	0.9459	69	62	0.8986	69	62	0.8986	131	123	0.9389	123	123	0.9389	274	255	0.9307	274	255	0.9307
72	73	72	0.9863	47	47	1.0000	47	47	1.0000	128	123	0.9609	123	123	0.9609	248	242	0.9758	248	242	0.9758
71	77	75	0.9740	26	25	0.9615	26	25	0.9615	94	92	0.9787	92	92	0.9787	197	192	0.9746	197	192	0.9746
70	100	99	0.9900	54	52	0.9630	54	52	0.9630	138	135	0.9783	135	135	0.9783	292	286	0.9795	292	286	0.9795
69	78	77	0.9872	84	82	0.9762	84	82	0.9762	181	170	0.9392	170	170	0.9392	343	329	0.9592	343	329	0.9592
68	46	37	0.8043	75	57	0.7600	75	57	0.7600	168	146	0.8690	146	146	0.8690	289	240	0.8304	289	240	0.8304
67	59	48	0.8136	63	52	0.8254	63	52	0.8254	124	93	0.7500	93	93	0.7500	246	193	0.7846	246	193	0.7846
66	40	32	0.8000	50	46	0.9200	50	46	0.9200	78	69	0.8846	69	69	0.8846	168	147	0.8750	168	147	0.8750
65	16	15	0.9375	31	27	0.8710	31	27	0.8710	59	52	0.8814	52	52	0.8814	106	94	0.8868	106	94	0.8868
64	11	10	0.9091	17	16	0.9412	17	16	0.9412	59	55	0.9322	55	55	0.9322	87	81	0.9310	87	81	0.9310
63	11	11	1.0000	19	19	1.0000	19	19	1.0000	45	39	0.8667	39	39	0.8667	75	69	0.9200	75	69	0.9200
62	20	17	0.8500	16	14	0.8750	16	14	0.8750	42	36	0.8571	36	36	0.8571	78	67	0.8590	78	67	0.8590
61	7	7	1.0000	15	11	0.7333	15	11	0.7333	28	24	0.8571	24	24	0.8571	50	42	0.8400	50	42	0.8400
60	12	11	0.9167	9	9	1.0000	9	9	1.0000	21	19	0.9048	19	19	0.9048	42	39	0.9286	42	39	0.9286
	1523	1447		1335	1174		1335	1174		2348	2077		2348	2077		5206	4698		5206	4698	

FY86									NFO							
	JET								PROP				NFO			
	BEG INV	END INV	CR		BEG INV	END INV	CR		BEG INV	END INV	CR		BEG INV	END INV	CR	
YG																
85	0	0	-		0	0	0		0	0	-		0	0	-	
84	2	2	1.0000		0	0	0		2	2	-		2	2	1.0000	
83	11	11	1.0000		12	12	1.0000		23	23	1.0000		23	23	1.0000	
82	6	6	1.0000		9	9	1.0000		15	15	1.0000		15	15	1.0000	
81	57	57	1.0000		32	32	1.0000		89	89	1.0000		89	89	1.0000	
80	191	185	0.9886		199	189	0.9497		390	374	0.9590		390	374	0.9590	
79	137	126	0.9197		196	182	0.9286		333	308	0.9249		333	308	0.9249	
78	97	90	0.9278		130	120	0.9231		227	210	0.9251		227	210	0.9251	
77	107	100	0.9346		113	109	0.9646		220	209	0.9500		220	209	0.9500	
76	47	46	0.9787		78	73	0.9359		125	119	0.9520		125	119	0.9520	
75	64	62	0.9688		142	141	0.9930		206	203	0.9854		206	203	0.9854	
74	71	68	0.9577		157	149	0.9490		228	217	0.9518		228	217	0.9518	
73	70	68	0.9714		133	131	0.9850		203	199	0.9803		203	199	0.9803	
72	46	45	0.9783		89	89	1.0000		135	134	0.9926		135	134	0.9926	
71	48	48	1.0000		99	95	0.9596		147	143	0.9728		147	143	0.9728	
70	44	43	0.9773		92	90	0.9783		136	133	0.9779		136	133	0.9779	
69	66	65	0.9848		88	88	1.0000		154	153	0.9935		154	153	0.9935	
68	38	38	1.0000		63	61	0.9683		101	99	0.9802		101	99	0.9802	
67	32	28	0.8750		37	36	0.9730		69	64	0.9275		69	64	0.9275	
66	27	24	0.8889		54	38	0.7037		81	62	0.7654		81	62	0.7654	
65	12	11	0.9167		44	36	0.8182		56	47	0.8393		56	47	0.8393	
64	10	9	0.9000		34	32	0.9412		44	41	0.9318		44	41	0.9318	
63	11	11	1.0000		21	19	0.9048		32	30	0.9375		32	30	0.9375	
62	7	5	0.7143		25	22	0.8800		32	27	0.8438		32	27	0.8438	
61	4	4	1.0000		18	15	0.8333		22	19	0.8636		22	19	0.8636	
60	2	2	1.0000		11	9	0.8182		13	11	0.8462		13	11	0.8462	
	1207	1154			1876	1777			3083	2931			3083	2931		

FY85					PILOT															
	HELO				JET				PROP				CR				PILOT			
	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV
YG																				
84	1	1	1.0000	0	0	0.0000	0	0	0.0000	0	0	0.0000	1	1	1.0000	1	1	1.0000	1	1
83	9	9	1.0000	23	23	1.0000	27	27	1.0000	27	27	1.0000	59	59	1.0000	59	59	1.0000	59	59
82	40	40	1.0000	44	44	1.0000	71	71	1.0000	71	71	1.0000	155	155	1.0000	155	155	1.0000	155	155
81	62	61	0.9839	62	62	1.0000	89	88	0.9888	89	88	0.9888	213	213	0.9906	213	211	0.9906	213	211
80	94	94	1.0000	55	55	1.0000	158	157	0.9937	158	157	0.9937	307	307	0.9967	307	306	0.9967	307	306
79	158	155	0.9810	141	121	0.8582	194	155	0.7990	194	155	0.7990	493	431	0.8742	493	431	0.8742	493	431
78	159	148	0.9308	233	173	0.7425	224	151	0.6741	224	151	0.6741	616	472	0.7662	616	472	0.7662	616	472
77	129	122	0.9457	147	131	0.8912	161	138	0.8571	161	138	0.8571	437	391	0.8947	437	391	0.8947	437	391
76	54	52	0.9630	63	60	0.9524	80	74	0.9250	80	74	0.9250	197	186	0.9442	197	186	0.9442	197	186
75	91	91	1.0000	99	96	0.9697	134	132	0.9851	134	132	0.9851	324	319	0.9846	324	319	0.9846	324	319
74	129	128	0.9922	69	67	0.9710	152	145	0.9539	152	145	0.9539	350	340	0.9714	350	340	0.9714	350	340
73	99	94	0.9495	82	76	0.9268	119	112	0.9412	119	112	0.9412	300	282	0.9400	300	282	0.9400	300	282
72	87	86	0.9885	62	60	0.9677	116	111	0.9569	116	111	0.9569	265	257	0.9698	265	257	0.9698	265	257
71	89	87	0.9775	34	32	0.9412	87	84	0.9655	87	84	0.9655	210	203	0.9667	210	203	0.9667	210	203
70	134	133	0.9925	71	70	0.9859	104	101	0.9712	104	101	0.9712	309	304	0.9838	309	304	0.9838	309	304
69	92	92	1.0000	105	104	0.9905	170	162	0.9529	170	162	0.9529	367	358	0.9755	367	358	0.9755	367	358
68	63	62	0.9841	104	103	0.9904	150	147	0.9800	150	147	0.9800	317	312	0.9842	317	312	0.9842	317	312
67	83	83	1.0000	106	101	0.9528	138	134	0.9710	138	134	0.9710	327	318	0.9725	327	318	0.9725	327	318
66	67	60	0.8955	104	91	0.8750	124	115	0.9274	124	115	0.9274	295	266	0.9017	295	266	0.9017	295	266
65	43	35	0.8140	51	41	0.8039	81	67	0.8272	81	67	0.8272	175	143	0.8171	175	143	0.8171	175	143
64	15	15	1.0000	35	29	0.8286	78	65	0.8333	78	65	0.8333	128	109	0.8516	128	109	0.8516	128	109
63	18	14	0.7778	24	23	0.9583	59	51	0.8644	59	51	0.8644	101	88	0.8713	101	88	0.8713	101	88
62	19	19	1.0000	31	31	1.0000	54	46	0.8519	54	46	0.8519	104	96	0.9231	104	96	0.9231	104	96
61	10	8	0.8000	21	20	0.9524	47	43	0.9149	47	43	0.9149	78	71	0.9103	78	71	0.9103	78	71
60	20	19	0.9500	24	21	0.8750	39	36	0.9231	39	36	0.9231	83	76	0.9157	83	76	0.9157	83	76
	1765	1708		1790	1634		2656	2412		2656	2412		6211	5754		6211	5754		6211	5754

FY84																				
	HELO		JET		PILOT		PROP						PILOT							
YG	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV	CR	BEG INV	END INV
83	11	11	1.0000	0	0	0.0000	2	2	1.0000	13	13	1.0000	13	13	1.0000	64	64	1.0000	64	64
82	34	34	1.0000	4	4	1.0000	26	26	1.0000	157	157	0.9583	157	155	0.9873	157	155	0.9873	157	155
81	43	43	1.0000	66	66	1.0000	48	48	1.0000	38	38	1.0000	38	38	1.0000	38	38	1.0000	38	38
80	16	16	1.0000	11	11	1.0000	11	11	1.0000	128	128	0.9348	128	125	0.9766	128	125	0.9766	128	125
79	53	53	1.0000	29	29	1.0000	46	46	1.0000	457	457	0.9120	457	420	0.9190	457	420	0.9190	457	420
78	103	98	0.9515	138	125	0.9058	216	197	0.9120	547	490	0.8288	547	490	0.8958	547	490	0.8958	547	490
77	149	141	0.9463	176	165	0.9375	222	184	0.8288	377	360	0.9568	377	360	0.9549	377	360	0.9549	377	360
76	61	57	0.9344	79	70	0.8861	89	82	0.9213	376	365	0.9707	376	365	0.9707	376	365	0.9707	376	365
75	100	98	0.9800	115	107	0.9304	162	155	0.9568	308	290	0.9416	308	290	0.9416	308	290	0.9416	308	290
74	130	129	0.9923	75	74	0.9867	171	162	0.9474	276	267	0.9674	276	267	0.9674	276	267	0.9674	276	267
73	93	88	0.9462	86	81	0.9419	129	121	0.9380	315	308	0.9778	315	308	0.9778	315	308	0.9778	315	308
72	87	86	0.9885	59	58	0.9831	92	89	0.9674	371	363	0.9784	371	363	0.9784	371	363	0.9784	371	363
71	90	86	0.9556	32	30	0.9375	126	123	0.9762	325	319	0.9815	325	319	0.9815	325	319	0.9815	325	319
70	123	122	0.9919	66	63	0.9545	187	180	0.9626	332	327	0.9849	332	327	0.9849	332	327	0.9849	332	327
69	84	84	1.0000	100	99	0.9900	184	180	0.9783	307	298	0.9707	307	298	0.9707	307	298	0.9707	307	298
68	54	53	0.9815	87	86	0.9885	175	170	0.9714	214	205	0.9579	214	205	0.9579	214	205	0.9579	214	205
67	77	77	1.0000	80	80	1.0000	147	143	0.9728	166	166	0.7711	166	166	0.7711	166	166	0.7711	166	166
66	70	68	0.9714	90	87	0.9667	125	109	0.8720	115	115	0.8609	115	115	0.8609	115	115	0.8609	115	115
65	40	38	0.9500	49	42	0.8571	104	80	0.7692	87	87	0.8966	87	87	0.8966	87	87	0.8966	87	87
64	22	16	0.7273	40	32	0.8000	70	60	0.8571	99	99	0.8687	99	99	0.8687	99	99	0.8687	99	99
63	19	15	0.7895	26	24	0.9231	59	54	0.9153	5626	5299		5626	5299		5626	5299		5626	5299
62	25	24	0.9600	27	25	0.9259	56	47	0.8393											
61	12	12	1.0000	19	19	1.0000	48	40	0.8333											
60	30	26	0.8667	21	20	0.9524	2625	2427												
	1526	1475		1475	1397		2625	2427												

Fy78																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
------	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Fy77																			
			</																

APPENDIX B. SAMPLE MEAN VALUES

Table B-1. Mean Values for Full Sample of Aviators

Variable	Mean
CR%	91.0605968
ACP%	0.0450780
VSISIB%	0.0240245
IRAD%	0.0180602
MSR2%	0.0418060
MSR3%	0.0418060
UNEMP%	6.6065775

Table B-2. Mean Values for Pilot Sample

Variable	Mean
CRPILOT%	85.6314223
ACP%	0.0443630
VSISIB%	0.0209424
IRAD%	0.0141361
MSR2%	0.0392670
MSR3%	0.0392670
UNEMP%	6.6172775

Table B-3. Mean Values for NFO Sample

Variable	Mean
CRNFO%	91.4860112
ACP%	0.0421178
VSISIB%	0.0267882
IRAD%	0.0227209
MSR2%	0.0420757
MSR3%	0.0420757
UNEMP%	6.6011220

Table B-4. Mean Values for Helo Pilot Sample

Variable	Mean
CRHELO%	92.2326705
ACP%	0.0500852
VSISIB%	0.0237784
IRAD%	0.0153409
MSR2%	0.0426136
MSR3%	0.0426136
UNEMP%	6.6008523

Table B-5. Mean Values for Jet Pilot Sample

Variable	Mean
CRJET%	91.9451247
ACP%	0.0474792
VSISIB%	0.0207479
IRAD%	0.0149584
MSR2%	0.0415512
MSR3%	0.0415512
UNEMP%	6.6102493

Table B-6. Mean Values for Prop Pilot Sample

Variable	Mean
CRPROP%	88.2486957
ACP%	0.0436685
VSISIB%	0.0221196
IRAD%	0.0146739
MSR2%	0.0407609
MSR3%	0.0407609
UNEMP%	6.6190217

Table B-7. Mean Values for Jet NFO Sample

Variable	Mean
CRJNFO%	92.4948276
ACP%	0.0466954
VSISIB%	0.0255747
IRAD%	0.0232759
MSR2%	0.0431034
MSR3%	0.0431034
UNEMP%	6.5870690

Table B-8. Mean Values for Prop NFO Sample

Variable	Mean
CRNFO%	90.5215385
ACP%	0.0377534
VSISIB%	0.0279452
IRAD%	0.0221918
MSR2%	0.0410959
MSR3%	0.0410959
UNEMP%	6.6145205

LIST OF REFERENCES

Cymrot, D.J., Determining Continuation Rates For Pilots From The Officer Master File, Center for Naval Analyses Research Memorandum, CRM 88-90 June 1988, The Center for Naval Analysis, Alexandria, Virginia, June 1988.

Cymrot, D.J., Implementation Of The Aviation Continuation Pay (ACP) Program, Center for Naval Analysis Research Memorandum, CRM 89-61 April 1989, The Center for Naval Analysis, Alexandria, Virginia, April 1989.

Cymrot, D.J., The Size, Timing, And Policy Implications Of Pilot Endstrength Growth, Center for Naval Analysis Research Memorandum, CRM 89-90 June 1989, The Center for Naval Analysis, Alexandria, Virginia, June 1989.

Gujarati, D.N., Basic Econometrics, 2nd Ed., McGraw-Hill, Inc., New York, 1988.

INITIAL DISTRIBUTION LIST

	No. Copies
1. Defense Technical Information Center Cameron Station Alexandria, Virginia 22304-6145	2
2. Library, Code 52 Naval Postgraduate School Monterey, California 93943-5101	2
3. Mark J. Eitelberg Department of Systems Management (SM/Eb) Naval Postgraduate School Monterey, CA 93943	1
4. Stephen L. Mehay Department of Systems Management (SM/Mp) Naval Postgraduate School Monterey, CA 93943	2
5. LT Russell S. Turner, USN 352 Sigwin Drive Fairfield, CT 06430	1